

Remarks

Applicant respectfully requests reconsideration of this application as amended. Claims 1, 3-4, 9, 18, 20-21, 32, 34-35, 38, and 40 have been amended. No claims have been cancelled or added. Therefore, claims 1, 3-4, 7-9, 18, 20-21, and 27-45 are presented for examination.

Claim Objections

Claim 32 stands objected to because of the following informalities: The claim recites “An system,” rather than --A system--. Additionally, the new limitation, “by selecting those events that are not to be counted,” was perhaps intended to read, --by filtering those events that are not to be counted--, as is now recited in claims 1, 18 and 40. Claim 32 has been amended to address the objections and is now in better form for allowance. As such, applicant respectfully requests that the claim objection be withdrawn.

35 U.S.C. §103(a) Rejection

Claims 1, 3, 7-9, 18, 20, 21, 27-34 and 36-45 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Larsen et al. (U.S. Patent No. 5,835,705) in view of Dreyer et al. (U.S. Patent No. 5,657,253). Applicant submits that the present claims are patentable over Larsen in view of Dreyer.

Larsen discloses “the processor has *first and second modes of operation . . . [and]* when the performance monitor is operating in the first mode, a first counter within the performance monitor increments *in response to each occurrence of the first event* and a second counter within the performance monitor increments *in response to each*

occurrence of the second event” (col. 2, lines 2-9; emphasis provided). Larsen additionally discloses using a “*performance monitor . . . [to receive] as inputs event occurrences . . . [s]elected event occurrences among the numerous event occurrences that may be received by performance monitor are recorded . . . within Monitor Counters (PMCs) within performance monitor . . . [and the] performance monitor 50 outputs the value of the specified PMC*” (col. 4, lines 46-64; emphasis provided). Larsen further discloses “in global mode the event occurrences generated by all of the logical partitions of processor are input into multiplexer. Multiplexer then routes the event occurrences to particular counters among PMCs in response to select input” (col. 5, lines 7-11).

Dreyer discloses an apparatus for measuring and monitoring various parameters that contribute to the performance of a processor. The apparatus includes a pair of programmable event counters for counting any two independent events selected from a predetermined list of processor events. A specialized register controls the operation of the event counters and also selects the events to be counted. The contents of the event counters can be accessed either by a supervisor mode program which reads an instruction or through a special access port. (Dreyer at Abstract.)

Claim 1, as amended, recites in part “an event selection control register (ECSR) to: instruct the multiplexer to select a class of events from a group of event signals issued from the processor; and select an event from the class of events by qualifying the event based on a thread ID and a thread current privilege level (CPL).” Applicant submits that Larsen does not disclose or suggest *an event selection control register to instruct a multiplexer to select a class of events from a group of event signals issued from the*

processor and select an event from the class of events by qualifying the event based on a thread ID and a thread CPL.

The performance monitor of Larsen receives event occurrences to input to a multiplexer which then routes those event occurrences to a variety of counters. As described in Larsen, the multiplexers of the performance monitor only route event occurrences according to where the event occurrence originated from and what thread the event occurrence belongs to. (Larsen at col. 6, ln. 39-col. 7, ln.3.) Applicant can find no disclosure or suggestion in Larsen of selecting a class of events from a group of event signals. In addition, Larsen does not disclose or suggest further selecting an event by qualifying the event based on a thread ID and a thread CPL.

Furthermore, applicant submits that Dreyer does not disclose or suggest *an event selection control register to instruct a multiplexer to select a class of events from a group of event signals issued from the processor and select an event from the class of events by qualifying the event based on a thread ID and a thread CPL*. Therefore, neither Larsen nor Dreyer, individually or in combination, disclose or suggest the features of claim 1. As a result, claim 1 is patentable over Larsen in view of Dreyer.

Claims 3-4, 7-9, and 30-31 depend from claim 1 and include additional limitations. Therefore, claims 3-4, 7-9, and 30-31 are also patentable over Larsen in view of Dreyer.

Claims 18, 32 and 40 contain limitations similar to those of claim 1. Accordingly, applicant respectfully requests the withdrawal of the rejection of claims 18, 32 and 40 and their dependent claims.

Claims 4 and 35 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Larsen et al. in view of Dreyer et al., as applied to claims 1 and 34 above, respectively, and further in view of Diepstraten et al. (U.S. Patent No.6,205,468). Applicant submits that the present claims are patentable over Diepstraten. Diepstraten discloses a context controller for managing multitasking in a processor. (Diepstraten at Abstract.) Claims 4 and 35 depend from claims 1 and 32, respectively. As discussed above, Larsen in view of Dreyer does not disclose or suggest *an event selection control register to instruct a multiplexer to select a class of events from a group of event signals issued from the processor and select an event from the class of events by qualifying the event based on a thread ID and a thread CPL*, as recited by claims 1 and 32. Nor does Diepstraten disclose or suggest such a feature. As dependent claims necessarily include the limitations of their independent claims, claims 4 and 35 are patentable over Larsen and Dreyer in view of Diepstraten.

Applicant respectfully submits that the rejections have been overcome and that the claims are in condition for allowance. Accordingly, applicant respectfully requests the rejections be withdrawn and the claims be allowed.

The Examiner is requested to call the undersigned at (303) 740-1980 if there remains any issue with allowance of the case.

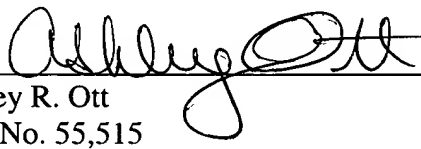
Applicant respectfully petitions for an extension of time to respond to the outstanding Office Action pursuant to 37 C.F.R. § 1.136(a) should one be necessary. Please charge our Deposit Account No. 02-2666 to cover the necessary fee under 37 C.F.R. § 1.17(a) for such an extension.

Please charge any shortage to our Deposit Account No. 02-2666.

Respectfully submitted,

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